

WHAT IS CLAIMED IS:

1. A color agent for a road marking material comprising composite particles having an average particle diameter of 0.01 to 10.0 μm , said composite particles comprising:

inorganic particles;

a gluing agent coating layer formed on surface of said inorganic particle; and

an organic pigment coat formed onto said gluing agent coating layer in an amount of from 1 to 500 parts by weight based on 100 parts by weight of said inorganic particles.

2. A color agent according to claim 1, wherein said gluing agent is an organosilicon compound, a coupling agent, an oligomer compound or a polymer compound.

3. A color agent according to claim 1, wherein said inorganic particles are white pigments having a refractive index of not less than 2.0, extender pigments having a refractive index of less than 2.0 or the mixture thereof.

4. A color agent according to claim 1, wherein said inorganic particles are particles each having on at least a part of the surface thereof, a coating layer comprising at least one compound selected from the group consisting of hydroxides of aluminum, oxides of aluminum, hydroxides of silicon and oxides of silicon.

5. A color agent for a road marking material comprising composite particles having an average particle diameter of 0.01 to 10.0 μm , said composite particles comprising:

inorganic particles;

a gluing agent coating layer formed on surface of said inorganic particle;

an organic pigment coat formed onto said gluing agent coating layer in an amount of from 1 to 500 parts by weight based on 100 parts by weight of said inorganic particles; and

a surface coating layer composed of at least one material selected from the group consisting of a fatty acid, a fatty acid metal salt and a coupling agent, which is formed on said organic pigment coat in an amount of 0.1 to 10.0% by weight based on the total weight of the composite particles including the surface coating layer.

6. A color agent according to claim 5, wherein said gluing agent is an organosilicon compound, a coupling agent, an oligomer compound or a polymer compound.

7. A color agent according to claim 5, wherein said inorganic particles are white pigments having a refractive index of not less than 2.0, extender pigments having a refractive index of less than 2.0 or the mixture thereof.

8. A color agent according to claim 5, wherein said inorganic particles are particles each having on at least a part of the surface thereof, a coating layer comprising at

least one compound selected from the group consisting of hydroxides of aluminum, oxides of aluminum, hydroxides of silicon and oxides of silicon.

9. A color agent according to claim 5, wherein said fatty acid is a saturated or unsaturated fatty acid having 12 to 22 carbon atoms.

10. A color agent according to claim 5, wherein said fatty acid metal salt is a salt of a saturated or unsaturated fatty acid having 12 to 22 carbon atoms, and an alkali earth metal selected from magnesium, calcium, strontium and barium, an alkali metal selected from lithium, sodium and potassium, or a metal selected from zinc, aluminum, copper, iron, lead and tin.

11. A color agent according to claim 5, wherein said coupling agent is a silane-based coupling agent selected from the group consisting of γ -aminopropyltriethoxysilane, γ -aminopropyltrimethoxysilane, vinyltrimethoxysilane, vinyltriethoxysilane, vinyltrichlorosilane, γ -chloropropyltrimethoxysilane, γ -chloropropylmethyldichlorosilane, γ -chloropropylmethyldimethoxysilane, γ -mercaptopropyltrimethoxysilane,

γ -glycidoxypropyltrimethoxysilane,
 γ -glycidoxypropylmethyldiethoxysilane,
 γ -methacryloxypropyltrimethoxysilane,
 γ -methacryloxypropylmethyldimethoxysilane, N- β (aminoethyl)- γ -
 aminopropyltrimethoxysilane, N- β (aminoethyl)- γ -
 aminopropylmethyldimethoxysilane, vinyltris(β -
 methoxyethoxy)silane, β -(3,4-
 epoxycyclohexyl)ethyltrimethoxysilane and N-phenyl- γ -
 aminopropyltrimethoxysilane.

12. A color agent according to claim 5, wherein the amount of said fatty acid, said fatty acid metal salt or said coupling agent is 0.1 to 10.0% by weight, calculated as C, based on the weight of the color agent including the surface coating layer made of the fatty acid, the fatty acid metal salt or the coupling agent.

13. A color agent according to claim 5, wherein said color agent has a BET specific surface area value of 0.5 to 500 m²/g, a tinting strength of not less than 110%, a hiding power of not less than 200 cm²/g, a heat resistance of not less than 180°C, a light resistance (ΔE^* value) of not more than 5.0 and a surface activity of not more than 1.5%.

14. A road marking material comprising a binder resin, the color agent as defined in claim 1 or 5 and a filler, said color agent being contained in an amount of 0.1 to 60% by weight based on the weight of the road marking material.

15. A road marking material according to claim 14, wherein said filler is at least one material selected from the group consisting of calcium carbonate, talc, silica powder and glass beads.

16. A road marking material according to claim 14, further comprising at least one material selected from the group consisting of a reflecting material, a plasticizer, a solvent, a defoamer, a surfactant and an assistant.

17. A road marking material according to claim 14, wherein said road marking material has an abrasion resistance of not more than 400 mg, a light resistance (ΔE^* value) of not more than 5.0 and an aging resistance (ΔE^* value) of not more than 2.5.

18. In a method of forming a road marking material comprising a binder resin, a color agent and a filler, the improvement comprising using as said color agent, composite particles having an average particle diameter of 0.01 to 10.0 μm , said composite particles comprising:

inorganic particles;

a gluing agent coating layer formed on surface of said inorganic particle; and

an organic pigment coat formed onto said gluing agent coating layer in an amount of from 1 to 500 parts by weight based on 100 parts by weight of said inorganic particles.